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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,004	12/01/2003	Gerd Danner	34874-082 UTIL	5231
64280	7590	10/15/2007		
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY & POPEO, P.C. 9255 TOWNE CENTER DRIVE SUITE 600 SAN DIEGO, CA 92121			EXAMINER CHEN, TE Y	
			ART UNIT 2161	PAPER NUMBER
			MAIL DATE 10/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/726,004

Applicant(s)

DANNER ET AL.

Examiner

Susan Y. Chen

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2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21, 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

Response to Amendment

This office action is in response to the amendment filed on August 01, 2007.

Claims 1-23, are pending for examination, claims 1 and 15 have been amended.

Specification

The disclosure is objected to because of the following informalities:

At section 0041, there is a typing error, the phrase "a time leg" should be changed to "a time log".

Applicant is reminded to thoroughly check the whole specification to remove all possible semantic errors as needed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-22, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

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one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 1 and 15, the claimed subject matters "if a report requests data or services from the data sources of the first data set, an OLAP engine does not process the OLTP data, and if the report requests data or services from the BI platform, the data is processed by the BI platform " are new, because they are not supported by the instant specification.

As to claim 2-14 and 16-22, these claims have the same defects as their base claims, hence, are rejected for the same reason.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 22, applicant's fails to define the metes and bounds of the claimed "first and second integration paths", "the first service quality" and "the second service quality", thereby, they render the claim to be indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 and 23, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. US 2003/0208460 issued to Srikant et al. (hereinafter referred as Srikant) in view of U.S. Patent No. 6,604,110 issued to Savage et al. (hereinafter referred as Savage).

Claim 1:

Srikant discloses a system for operational reporting of multidimensional analysis of business data sources [e.g., the Online Analytical Processing (OLAP) application at P. 1, Sections: 0003-0010, the Distributed Teradata Warehouse & Teradata Customer Analysis product at section 0035], the system comprising:

one or more data sources providing OLTP data [e.g., the data warehouse at Section 0004, the source metadata and the OLAP data store at P. 1, Sections: 0009, the Distributed Teradata Warehouse, 0034-0035, the units: 420, 434 at Fig. 4 and associated texts];

a business intelligence (BI) platform having a multidimensional database providing OLAP data [e.g., P. 1, Sections: 0003-0005, 0050-0052 & Fig. 4]; and

a mapping tool to transform the OLTP data of the data sources not being processed by an OLTP engine or the BI platform to a first data set in accordance with a common meta model of a unified view module [e.g., Sections: 0058 –0060, Fig. 6 and associated texts];

the unified view module integrate the first data set of the OLTP data with the multidimensional database to produce a common meta model data set [e.g., Fig. 8 and associated texts]; and

a user interface (UI) tool set for creating a unified UI for displaying reports that are run on the multidimensional database and common meta model data set, the unified UI build reports from the common meta model data set e.g., the Graphical User Interface (GUI) at P. 3, Sections: 0031-0034],

Srikant did not specifically disclosed that if a report request data or services from the data sources of the first data set, an OLAP engine does not process the OLTP data and if the report requests data or services from the BI platform, the data is processed by the BI platform.

However, Savage discloses the claimed features [e.g., Abstract, col. 2, lines 49- col. 3, lines 34, Fig(s). 2-4 and associated texts].

Srikant and Savage are both of the same endeavor to facilitate the OLAP analysis of data source in an Enterprise data Management (EDM) system by using metadata characteristics of a generic Model, hence, with the teachings of Srikant and Savage in front of him/her, it would have been obvious for an ordinary skilled person in the art at the time the invention was made being motivated to apply the automatically

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configuring generic metadata repository technique as disclosed by Savage into Srikant's system, because by doing so, as suggested by Savage, the combined system would provide a generic metadata repository which can be configured to reflect the construct of any given data source (Note, this including the claimed BI platform). Once configured, the source database can be automatically analyzed in an elemental sequence defined by the repository's entity structure which result in the set of metadata can be used directly to generate program code for a plurality of different EDM applications each with different database models and operating systems as desired by the various business applications [e.g., Savage: col. 2, lines 20-45].

Claim 2:

In addition to the limitations recited in claim 1, the combined system of Srikant and Savage further discloses the system comprising a UI runtime module to display the unified UI [e.g., Srikant: P. 3, Sections: 0035-0036].

Claim 3:

In addition to the limitations recited in claim 1, the combined system of Srikant and Savage further discloses the system comprising a data acquisition module to acquire the OLTP data from the OLTP data source, and to provide the OLTP data to the multidimensional database or to the unified view module [e.g., P.3, Sections: 0031, 0036-37].

Claim 4:

In addition to the limitations recited in claim 1, the combined system of Srikant and Savage further discloses the BI platform is to execute OLAP analysis on the multidimensional database [e.g., P. 2, Section: 0015-0016 & Fig. 7].

Claim 5:

In addition to the limitations recited in claim 4, the combined system of Srikant and Savage further discloses the BI platform further includes a communication channel connected to a remote OLAP data source [e.g., the Internet at P. 6, Sections: 0062-0064].

Claim 6:

In addition to the limitations recited in claim 3, the combined system of Srikant and Savage further discloses the data acquisition module further includes one or more resource adapters for connecting to the one or more data sources [e.g., Fig. 7 & P. 6, Sections: 0062-0064].

Claim 7:

In addition to the limitations recited in claim 3, the combined system of Srikant and Savage further discloses the data acquisition module further includes one or more extraction programs to read data from the one or more data sources [e.g., the extract/link/load software of OLAP at P. 1, Section: 0005 & Fig. 8].

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Claim 8:

In addition to the limitations recited in claim 3, the combined system of Srikant and Savage further discloses the data acquisition module further includes an exchange infrastructure for message-based exchange between the one or more data sources and the BI platform [e.g., the Teradata Customer Analysis Product at P. 3, Section: 0035].

Claim 9:

In addition to the limitations recited in claim 1, the combined system of Srikant and Savage further discloses the system comprising a mapping tool for mapping a data model of the one or more data sources to a common meta model for use by the unified view module [e.g., P. 5, Section: 0059].

Claim 10:

In addition to the limitations recited in claim 9, the combined system of Srikant and Savage further discloses the mapping is automatic [e.g., P. 2, Section: 0012].

Claim 11:

In addition to the limitations recited in claim 9, the combined system of Srikant and Savage further discloses the mapping is manual [e.g., P. 6, Section: 0071].

Claim 12:

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In addition to the limitations recited in claim 4, the combined system of Srikant and Savage further discloses the BI platform further comprises a persistency memory for storing one or more tables representing the OLAP analysis [e.g., the unit 312, Fig. 3].

Claim 13:

In addition to the limitations recited in claim 1, the combined system of Srikant and Savage further discloses the unified UI is generated by a web application [e.g., the Web GUI at P.3, Section: 0035 & P. 6, Section: 0064].

Claim 14:

In addition to the limitations recited in claim 1, the combined system of Srikant and Savage further discloses the unified UI is generated by a desktop application [e.g., the Web GUI at P. 6, Section: 0064].

Claim 15:

Srikant discloses an architecture for integrating online transactional processing (OLTP) systems with online analytical processing (OLAP) system [e.g., Srikant: the Online Analytical Processing (OLAP) application at P. 1, Sections: 0003-0010, Distributed Teradata Warehouse & Teradata Customer Analysis product at section 0035], the architecture comprising:

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a data access layer including one or more data access programs for accessing OLTP data from an OLTP data source [e.g., Srikant: Fig. 3];

a service layer including a business intelligence (BI) platform for generating OLAP data, and a mapping tool for transforming data from the OLTP data source to a first data set in accordance with a common meta-model [e.g., Srikant: P. 1, Sections: 0003-0005, 0050-0052, 0058 –0060 & Fig(s). 4 - 6 and associated texts];

a unified view module providing the common meta-model for OLTP data of the first data set integrated with OLAP data [e.g., Srikant: Fig. 8 and associated texts]; and

a user interface presentation layer configured to provide a user interface for displaying a report run on the integrated OLTP and OLAP data [e.g., Srikant: the Graphical User Interface (GUI) at P. 3, Sections: 0031-0034].

Srikant did not specifically disclosed that mapping tool for transforming data from the OLTP data source to a first data set is without processing the OLTP data by an OLAP engine or the BI platform.

However, Savage discloses the claimed features [e.g., Abstract, col. 2, lines 49- col. 3, lines 34, Fig(s). 2-4 and associated texts].

Srikant and Savage are both of the same endeavor to facilitate the OLAP analysis of data source in an Enterprise data Management (EDM) system by using metadata characteristics of a generic Model, hence, with the teachings of Srikant and Savage in front of him/her, it would have been obvious for an ordinary skilled person in the art at the time the invention was made being motivated to apply the automatically configuring generic metadata repository technique as disclosed by Savage into Srikant's

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system, because by doing so, as suggested by Savage, the combined system would provide a generic metadata repository which can be configured to reflect the construct of any given data source (Note, this including the claimed BI platform). Once configured, the source database can be automatically analyzed in an elemental sequence defined by the repository's entity structure which result in the set of metadata can be used directly to generate program code for a plurality of different EDM applications each with different database models and operating systems as desired by the various business applications [e.g., Savage: col. 2, lines 20-45].

Claim 16:

In addition to the limitations recited in claim 15, the combined system of Srikant and Savage further discloses the common meta-model is organized into a unified business query view for display in the user interface [e.g., Srikant: Fig. 2].

Claim 17:

In addition to the limitations recited in claim 15, the combined system of Srikant and Savage further discloses the user interface presentation layer includes a design time module for generating the user interface [e.g., Srikant: P. 3, Section: 0031].

Claim 18:

In addition to the limitations recited in claim 17, the combined system of Srikant and Savage further discloses the user interface presentation layer includes a runtime

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module having an application for displaying the user interface [e.g., Srikant: P. 3, Section: 0035].

Claim 19:

In addition to the limitations recited in claim 18, the combined system of Srikant and Savage further discloses the application is a web application [e.g., Srikant: P. 3, Section: 0035].

Claim 20:

In addition to the limitations recited in claim 18, the combined system of Srikant and Savage further discloses the application is a desktop application [e.g., Srikant: P. 3, Section: 0035].

Claim 21:

The claimed limitations that " unified view module does not include information identifying sources of data in the common meta model data set such that a mapping of the data is not visible to a user of the common meta model data set" is the defaulted nature of unified view module.

Claim 23:

This claim recites the similar limitations as claims 1 and 15 with different wording in a broader scope, hence, are rejected for the same rational.

Allowable Subject Matter

Claim 22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first and second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed on Aug. 01, 2007 have been fully considered but they are not persuasive.

The examiner disagrees with applicant's arguments against 35 U.S.C. 112, 1ST paragraph rejections that "Support for the amended claim 1 can be found in paragraph 0041 of the application as-filed, which describes how data can be from an OLTP system without the use of a BI platform or with the use of a BI platform."

The excerpt of paragraph 0041 is recorded as following:

"Through mapping routine into a common model, the data abstraction layer 106 allows for real-time integration of data coming from OLTP systems 112, one or more various OLAP systems such as OLAP engine 142, and the BI platform 116. OLTP systems 112 typically contain fine, granular and up-to-date data, but typically no data history. Data history is typically kept in the BI platform 116, but as described earlier, data in the BI platform 116 comes with a time lag between data creation and the data's availability for reporting. Hence, a data abstraction layer 106 on top of the data access layer 102 and service layer 104 integrates OLTP with OLAP reporting and leverages the benefits of both."

As set forth above, the citation of paragraph 0041, merely disclosed that a data abstraction layer 106 will integrate data coming from OLTP systems 112 and BI platform 116. No where in this paragraph reveals the claimed subject matters "if a report

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requests data or services from the data sources of the first data set, an OLAP engine does not process the OLTP data, and if the report requests data or services from the BI platform, the data is processed by the BI platform." In addition, it does not show how could a report requests "data or services"?

Thus, based on the discussion above, the examiner maintains the new matter rejections on record. In addition, the amended claim 15 has the same problem, hence were rejected for the same rational. Furthermore, claim 2-14 and 16-22, these claims have the same defects as their base claims 1 and 15 respectively, hence, are rejected for the same reason.

Concerning the arguments of claim 22 under 35 U.S.C. 112, 2nd paragraph rejection, applicant argued that "integration path 150 may be an implementation of the first integration path" and referred to the paragraph 0048 of instant specification as recorded following:

"In order to integrate data using the RADM integration path 150, no data modeling in the BI platform 116 is necessary. However, it may be necessary to map the data source's 112 proprietary data model into the common meta model 118 of the data abstraction layer 106. This mapping can be done automatically or manually within the service layer 104, as discussed above."

As set forth above, the paragraph 0048 merely cited that **"the integrating of data using the RADM integration path 150, no data modeling in the BI platform 116 is necessary."** Which clearly different from the claimed subject matters such as **"the first integration path comprising the OLTP data and the mapping tool and having a first service quality"**.

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In addition, applicant argued that "the integration path 152 may be an implementation of the second integration path" and referred to the paragraph 0051 of instant specification as recorded following:

"Remote BI platform integration operational data can be integrated into the operational reporting architecture 100 with using the BI platform's 116 OLAP engine 142 and generic BI platform services 144 via BI platform (BIP) integration path 152. The BIP integration path 152 adds slightly more overhead compared to the RADM integration path 150, but also offers the analytical capabilities of the OLAP engine 142 and the generic services 144 of the BI platform 116."

As set forth above, the paragraph 0051 merely cited that **"Remote BI platform integration operational data can be integrated into the operational reporting architecture 100 ...via BI platform (BIP) integration path 152."** Which clearly different from the claimed subject matters such as **"the second integration path comprising the BI platform and having a second service quality being different from the first service quality."** Even when the service qualities were defined in the paragraph 0017 of instant specification as cited as following:

"The service layer 104 uses the BI platform 116 to offer additional service qualities, like a persistency layer 140 to store data in structures that are optimized for reporting, OLAP analysis functionality from the OLAP engine 142 or generic BI services 144, e.g. planning, etc. One integration path may use some of these services whereas another integration path may use all of these services, e.g. remote BI platform integration and real-time data acquisition both integrate data into the BI platform 116. Integration paths may differ in whether they use the BI platform's persistency layer 140, but may commonly use all other services of the BI platform 116."

Based on the discussion above, contrary to applicant's arguments of Claim 22, since the comprised subject matters of claimed first and second integration paths are not clearly defined, thus, the 35 rejections on record are maintained.

The examiner further disagrees with applicant's piece-meal interpretations / arguments under 35 U.S.C. 103(a) rejections that "Srikant does not disclose a mapping tool to transform OLTP data not being processed by an OLAP engine or a BI platform to a data set in accordance with a common meta model."

In response to applicant's arguments against the references individually, the Office points out that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Furthermore, as cited in the above paragraphs, Srikant disclosed the claimed features comprising: a service layer including a business intelligence (BI) platform for generating OLAP data, and a mapping tool for transforming data from the OLTP data source to a first data set in accordance with a common meta-model [e.g., Srikant: P. 1, Sections: 0003-0005, 0050-0052, 0058 -0060 & Fig(s). 4 - 6 and associated texts]; a unified view module providing the common meta-model for OLTP data of the first data set integrated with OLAP data [e.g., Srikant: Fig. 8 and associated texts]; and a user interface presentation layer configured to provide a user interface for displaying a report run on the integrated OLTP and OLAP data [e.g., Srikant: the Graphical User Interface (GUI) at P. 3, Sections: 0031-0034]. Except that he did not specifically disclosed "mapping tool for transforming data from the OLTP data source to a first data set is without processing the OLTP data by an OLAP engine or the BI platform."

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Additionally, Savage disclosed the claimed features including a mapping tool to transform OLTP data not being processed by an OLAP engine or a BI platform to a data set in accordance with a common meta model, for example, Savage clearly disclosed the following:

"Data warehousing is representative of the characteristics of each of these EDM applications, which extract operational data of an enterprise from the enterprise operational data systems and collects it in a multi-dimensional database. The multi-dimensional database supports on-line analytical processing (OLAP) to analyze groups of records that share a common field value, in contrast to on-line transaction processing (OLTP) which accesses individual records in the operational data system relational database. In effect, OLAP extracts business intelligence while OLTP extracts data."
(col. 1, lines 34-44).

"According to the present invention, a method of obtaining the metadata of a data source comprises the steps of creating a data repository having an entity structure which defines the metadata characteristics of a generic model data source, accessing the data source to determine its construct, configuring the data repository entities to reflect the construct of the data source, and analyzing the data source in response to the configured data repository entities to obtain the source metadata. According to another aspect of the present invention, the step of analyzing the data source to determine its metadata includes the steps of obtaining those elements of source data which correspond to the metadata attributes of the configured data repository entities, and recording the obtained elements of source data in the data repository, each in

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association with their corresponding metadata attribute. In further accord with this aspect of the invention, the step of analyzing further includes the steps of inferring selected aspects of the data source structure on the basis of the recorded elements of source data, and recording those inferred data source aspects in the data repository for review by an operator, who may either accept or modify one or all of the inferences."

(col. 2, lines 61 – col. 3, lines 15)

"The present invention automates the process of building an EDM system application, and, in its best mode, the method is embodied as a software application. It employs an exhaustive reverse engineering process to analyze the source data and acquire a comprehensive set of source metadata. The invention then uses this information to build a model of the data. As part of the analysis process, the invention provides recommendations for the target EDM application database, such as primary keys, foreign keys, table splits, normalization, dimensions, measures, and views of the data. The result is an optimal target database for the EDM application." (col. 3, lines 16 – 27)

As set forth above, Savage disclosed the claimed features including a mapping tool (e.g., the use of source data reverse analytical engineering, metadata referencing, primary keys and foreign keys mapping technique in a common EDM modeling process) to transform OLTP data not being processed by an OLAP engine or a BI platform to a data set in accordance with a common meta model [e.g., the multi-dimensional data warehousing].

Hence, one of ordinary skill in the art at the time the invention was made would in fact, contrary to applicant's arguments, look to incorporate the generic metadata repository modeling technique as disclosed by Savage into Srikant's system, such that the combined system will be upgraded to include a mapping tool to transform OLTP data not being processed by an OLAP engine or a BI platform to a data set in accordance with the common meta modeling technique. Therefore, the examiner contends that there would be most definitely a reasonable expectation of success.

Because applicant does not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. The examiner concludes that the prior art read on the claimed features.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Y. Chen whose telephone number is 571-272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Susan Y Chen
Examiner
Art Unit 2161



October 1, 2007